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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

LEROUX, ETIENNE PIERRE

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2161

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/666,577	Applicant(s) XU ET AL.	
	Examiner Etienne P. LeRoux	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6-21,23-35,40,41 and 43-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6-21,23-35,40,41 and 43-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Prosecution Reopened

In view of the Appeal Brief filed on 12/22/2008, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Apu M Mofiz/

Supervisory Patent Examiner, Art Unit 2161

Claim Status

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Claims 1, 4, 6-21, 23-35, 40, 41 and 43-45 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 6-10, 12, 13, 15-21, 23-27, 29-32, 34, 40, 41, 43 and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Raman (US 5,579,223)

Regarding claim 1, Raman discloses

a first object identifier identifying a first object stored in the file system, wherein the first object comprises a first file stored in the file system [claim 1, first natural language text file]

a second object identifier identifying a second object stored in the file system, the second object being related to the first object [claim 1, second natural language text file]

wherein the second object comprises at least one of a second file generated from the first file [claim 1, translated version]

a relation identifier identifying a relationship between the first object and the second object wherein the data model includes a tuple in a format and order comprising the first identifier, the relation identifier and the second object identifier [claim 1, first natural language text file, translating the first natural language text file, second natural language text file]

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Note: The specification fails to provide a specific and deliberate definition of tuple, therefore, examiner interprets tuple as: set of (so many) elements – usually used of sets with ordered elements, (Merriam Webster OnLine)

Regarding claim 4, 21, Raman discloses wherein the relation identifier is a semantic of the first file [claim 1, translating the first natural language version]

Regarding claim 6, Raman discloses wherein the relation identifier comprises a property of the first object and the second object comprises a value of the property for the first object [claim 1, translating the first natural language version to create a translated version]

Regarding claim 7, Raman discloses wherein the data model represents a function operable to be performed in the semantic file system [abstract, versions in multiple languages]

Regarding claim 8, 23, Raman discloses wherein the function is associated with one or more of generating a view of the objects stored in the semantic file system, restricting access to an object in the file system, searching in the semantic file system, performing an action based on at least one predetermined condition, and performing archival functions in the semantic file system [abstract, merge utility determines differences and similarities between the first and second files]

Regarding claim 9, Raman discloses wherein the relation identifier identifies a dependency between the first object and the second object [Fig 4]

Regarding claim 10, Raman discloses wherein the dependency is associated with version information for the first object [Fig 2, original file block 201, col 3, lines 50-55]

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Regarding claim 12, Raman discloses wherein the dependency is associated with one or more users or one or more applications [col 1 lines 15-25]

Regarding claim 13, 24, 43, Raman discloses wherein the dependency is used to generate file space views for the one or more users or for the one or more applications [Fig !A, 1B]

Regarding claim 15, 16, Raman discloses wherein the relation identifier identifies the second object as including context semantic information for the first object, the context semantic information being associated with access patterns for the first object [col 1, lines 15-25]

Regarding claim 17, Raman discloses wherein the relation identifier identifies the second object as including content-based semantic information associated with content of the first object [claim 1]

Regarding claim 18, 32, Raman discloses wherein the data model is used to represent multiple types of relation identifiers in a schema [col 1, lines 15-25]

Regarding claim 19, 25, 26, Raman discloses wherein the schema is modifiable to include a new relation identifier or to remove a relation identifier currently in the schema [col 1, lines 15-25].

Regarding claim 20, 40, Raman discloses:

storing objects in the file system including a first object and a second object, wherein the first object is related to the second object [claim 1]

storing a relation meta data identifying a relationship between the first object and the second object, wherein the relationship is represented by a data model including a first identifier identifying the first object [claim 1]

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a second identifier identifying the second object; and a relation identifier identifying the relationship between the first object and the second object [claim 1]

determining whether the first object in the file system is accessed [Fig 5A, block 510]

identifying a predetermined condition associated with the first object in response to the first object being accessed [Fig 5A, compare block identifiers, block 511]

performing an action in response to the predetermined condition existing, wherein the relation identifier identifies the predetermined condition and the action [Fig 5A, block 512-515]

Regarding claim 27, Raman discloses wherein at least one of the plurality of relation metadata is determined through property inheritance from the schema [col 1, lines 15-25]

Regarding claim 29, Raman discloses extracting semantic information for the objects and storing the semantic information [col 3, lines 60-65]

Regarding claim 30, Raman discloses receiving a request for information stored in the file system and searching the semantic information to identify any files stored in the file system that meet the request [Fig 5A, block 511]

Regarding claim 31, Raman discloses wherein the semantic information includes one or more types of semantic information comprising content-based semantic information related to the contents of files stored in the file system, context-based semantic information related to user access patterns of the files stored in the file system, and property semantic information related to statistics or descriptions of the files in the file system [claim 1]

Regarding claim 34, Raman discloses using one or more of a placement algorithm and caching algorithm for placing or caching related objects in the file [Fig 5A, block 510]

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Regarding claim 41, Raman discloses extraction means for extracting the semantic information from the plurality of files [abstract, merge utility]

Regarding claim 44, Raman discloses search means for receiving a search request and for searching information stored in the storage means that meets the search request [Fig 5A, block 511]

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raman as applied to claim 9 above, and further in view of applicant disclosed prior art (ADPA).

Regarding claim 11, Raman discloses the elements of the claimed invention as noted above but does not disclose wherein the dependency is associated with a hierarchical file space. ADPA discloses wherein the dependency is associated with a hierarchical file space [paragraph 29]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Raman to include wherein the dependency is associated with a hierarchical file space as taught by ADPA for the purpose of organizing files in a logical basis from the most general to the most specific to assist in rapid retrieval of one or more files.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raman as applied to claim 1 above, and further in view of Melahn et al (US 2003/0145306).

Regarding claim 14, Raman discloses the elements of the claimed invention as noted above but does not disclose wherein the relation identifier identifies the second object as including property semantic information for the first object, the property semantic information including statistical information for the first object. Melahn discloses wherein the relation identifier identifies the second object as including property semantic information for the first object, the property semantic information including statistical information for the first object [time stamps for the files indicate when they were created or last updated, para. 36]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Raman to include wherein the relation identifier identifies the second object as including property semantic information for the first object, the property semantic information including statistical information for the first object as taught by Melahn for the purpose of controlling the first file and subsequent second or more files derived from the first file.

Claims 28, 33, 35 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raman as applied to claim 20/31 above.

Regarding claim 28, Raman discloses the elements of the claimed invention as noted above but does not disclose identifying restriction on accessing the first object from the relation, wherein the first object is a file and the second object identifies one or more of a user and an application

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having restricted access to the file. Official Notice is taken that access control is well-known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Raman to include identifying restriction on accessing the first object from the relation, wherein the first object is a file and the second object identifies one or more of a user and an application having restricted access to the file for the purpose of maintaining the integrity of the file system by restricting access to qualified users.

Regarding claim 33, Raman discloses the elements of the claimed invention as noted above but does not disclose returning results of the search using a precision variable, wherein the precision variable is related to a relevance of search results to the search request. Official Notice is taken that returning results of the search using a precision variable, wherein the precision variable is related to a relevance of search results to the search request is well-known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Raman to include returning results of the search using a precision variable, wherein the precision variable is related to a relevance of search results to the search request for the purpose of ranking search results.

Regarding claim 35, 45, Raman discloses the elements of the claimed invention as noted above but does not disclose identifying one or more files in the file system to be archived based on the semantic information associated with the one or more files and archiving the files. Official Notice is taken that identifying one or more files in the file system to be archived based on the semantic information associated with the one or more files and archiving the files is well-known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Raman to include identifying one or more files in the file

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system to be archived based on the semantic information associated with the one or more files and archiving the files for the purpose of storing large files which are not frequently accessed in a less expensive storage system.

Response to Arguments

Applicant's arguments filed 12/22/2008 have been fully considered but are moot based on above new grounds of rejection necessitated by the very broad and general claims of the present application. Examiner maintains that it is difficult to determine exactly what has been invented and therefore, it is difficult to find prior art that matches the present invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne P. LeRoux whose telephone number is (571) 272-4022. The examiner can normally be reached on 8:00 am - 4:30 pm, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on (571) 272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. P. L./

Primary Examiner, Art Unit 2161

/Apu M Mofiz/

Supervisory Patent Examiner, Art Unit 2161